

Abstract of the Disclosure

In this invention, a chromatographic dry strip is used in combination with a transmittance detecting system in a single or multi-step test to quantitate analytes in biological fluid. Chemical reagents and conjugate labels are simply absorbed on the materials of the strip passages. The substrates, affinity reagents, or antibodies are immobilized on transparent beads in the detection cell of the strip. The sample passes through the strip. The captured analytes are detected for quantification. Uncaptured elements and interferences in the sample are drained to the absorbent portion when the sample passes the cell as a wash. This dry chromatographic strip with an analyte capture zone simplifies the procedure that a transmittance detecting system alone cannot overcome. By combining the transmittance detecting system with a dry chromatographic strip, many clinical tests can be performed easily. This novel approach overcomes the sensitivity limitation of reflectance detection and overcomes the limitation of complexity in liquid transmittance detection. Because of the easy quantification, applying such a strategy in diagnostic tests will provide great convenience for home or clinic use.